

| | | | |
|---------------------|------|---------|-----------|
| Linzer biol. Beitr. | 35/1 | 543-546 | 30.6.2003 |
|---------------------|------|---------|-----------|

A new species of *Atheta* THOMSON from caves in southern Spain (Coleoptera: Staphylinidae, Aleocharinae)

V. ASSING & J. VOGEL

A b s t r a c t : *Atheta temeris* sp.n. (Spain: Córdoba) is described, illustrated, and distinguished from the similar *A. sodalis* (ERICHSON). The species was found in caves.

K e y w o r d s : Coleoptera, Staphylinidae, Aleocharinae, *Atheta*, Palearctic region, Spain, taxonomy, new species, cave

Introduction

The staphylinid genus *Atheta* THOMSON is among the most diverse animal genera worldwide and, except for some subgenera, in a state of taxonomic and systematic confusion. Only the *Atheta* fauna of Central, Northern, and partly also of Southern Europe can be considered relatively well known. The vast majority of species are more or less r-selected inhabitants of unstable habitats, especially various types of decaying organic matter, and consequently have well-developed wings and eyes. Only few species are known to be associated with caves. In a recent - somewhat incomplete - list of staphylinid troglobies and troglaphiles, BORDONI & OROMI (1999) indicate five species of troglaphilic *Atheta*, four of them European.

An examination of material of an *Atheta* species recently collected in caves in Córdoba and made available to us by Ignacio Ribera revealed that it belongs to an unnamed species. It is here described and distinguished from its most similar congener and apparently closest relative, *Atheta sodalis* (ERICHSON).

Material

The material examined is deposited in the following collections:

DEIDeutsches Entomologisches Institut, Eberswalde
MHNG.....Muséum d'Histoire Naturelle, Genève
MNHUB.....Museum für Naturkunde der Humboldt-Universität, Berlin
NHMW.....Naturhistorisches Museum Wien
OÖLML.....Oberösterreichisches Landesmuseum Linz
cAssprivate collection V. Assing, Hannover
cSchprivate collection M. Schülke, Berlin
cVogprivate collection J. Vogel, Görlitz
cWunprivate collection P. Wunderle, Mönchengladbach

***Atheta temeris* sp.n. (Figs. 1-9)**

H o l o t y p e ♂: E - Córdoba, Homachuelos, Pasada Jeira, 19.X.1991, leg. Baena et al. / Holotypus ♂ *Atheta temeris* sp.n. det. V. Assing & J. Vogel 2002 (cAss). Paratypes: 23♂♂, 32♀♀: same data as holotype (DEI, MHNG, MNHUB, NHMW, OÖLML, cAss, cSch, cVog, cWun); 1♂: Cueva de los Mármoles Priego, Córdoba, 4-11.2.2001 (cAss); 1♂: E - Córdoba, Homachuelos, Pasada Jeira, 24.X.1991 (cAss); 1♀ [teneral]: same data, but 11.XII.1992, Martín & Hegueras (cAss).

D e s c r i p t i o n: 3.2-3.7 mm. In facies similar to *A. sodalis* (Fig. 1). Head blackish, pronotum dark brown, elytra yellowish brown with the scutellar region and the posterior external angles usually weakly infuscate; abdomen dark brown, with the posterior margins of the segments and the apex usually distinctly lighter; antennae dark brown with the basal antennomeres only indistinctly lighter; legs yellowish brown to light brown.

Head usually feebly transverse, 1.05-1.10 times as wide as long (length measured from anterior margin of clypeus); not distinctly dilated behind eyes; posterior angles rounded, weakly marked; eyes large, in dorsal view slightly longer than postocular region; integument with shallow microreticulation; puncturation very fine and sparse; pubescence suberect and predominantly directed mediad. Antennae slender, with antennomeres I-III distinctly oblong and of subequal length, IV approximately as wide and long, V-X of increasing width and increasingly transverse, X less than 1.5 times as wide as long, and XI less than twice as long as wide.

Pronotum usually 1.25-1.30 times as wide as head and 1.25-1.30 times as wide as long; puncturation and microsculpture more pronounced than on head; pubescence directed caudad in median line and diagonally latero-caudad in lateral areas.

Elytra at suture almost (approximately 0.95 x) as long pronotum; puncturation denser and more pronounced than that of pronotum, often slightly rasp-like; microsculpture distinct.

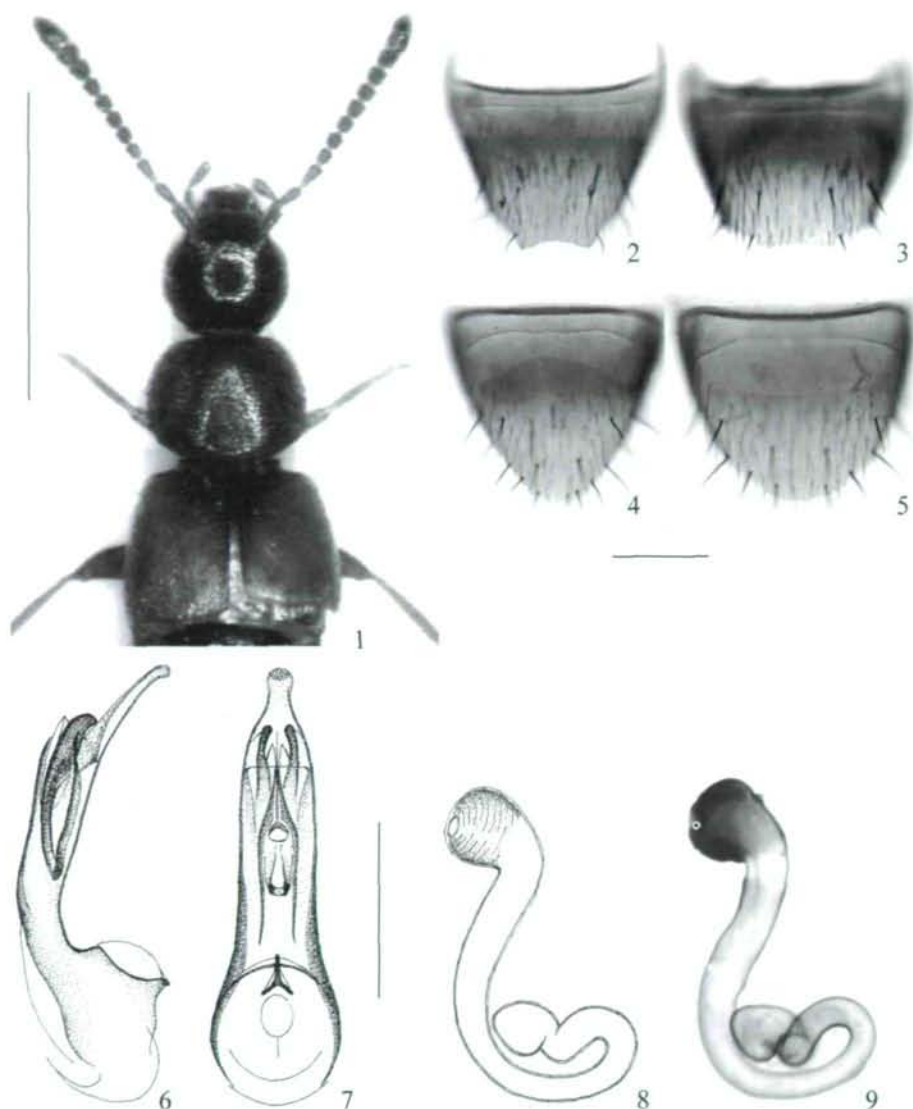
Abdomen slender, maximal width at segment VI; puncturation fine, much sparser on posterior tergites (especially tergite VII) than on anterior tergites; microsculpture transverse.

♂: tergite VIII posteriorly distinctly concave, this concavity usually delimited by angles (Fig. 2); sternite VIII of subtriangular shape, posteriorly obtusely pointed (Fig. 3); median of lobe of aedeagus of highly distinctive morphology, with very long and slender ventral process of characteristic shape both in ventral and in lateral view (Figs. 6-7).

♀: posterior margin of tergite VIII in the middle very shallowly concave or truncate (Fig. 4); posterior margin of sternite VIII broadly rounded (Fig. 5); spermatheca as in Figs. 8-9.

E t y m o l o g y: The name is the genitive of the noun *temo* (Latin) and denotes "of the darkness".

C o m p a r a t i v e n o t e s: *Atheta temeris* is highly similar to *A. sodalis* not only in external characters (size, proportions, coloration, microsculpture, puncturation, pubescence), but also in the primary and secondary sexual characters, i. e. the shapes of the (sexually dimorphic) tergite and sternite VIII, the morphology of the aedeagus (long and slender ventral process with an apex of remarkably similar shape, internal structures), and the general shape of the spermatheca. The striking similarities especially in the primary and secondary sexual characters are very likely to represent synapomorphic character states and consequently suggest that *A. temeris* and *A. sodalis* are adelphotaxa.



Figs. 1-9: *Atheta temeris* sp. n.: 1 - forebody; 2 - ♂ tergite VIII; 3 - ♂ sternite VIII; 4 - ♀ tergite VIII; 5 - ♀ sternite VIII; 6, 7 - aedeagus in lateral and in ventral view; 8, 9 - spermathecae. Scales: 1: 1.0 mm; 2-9: 0.2 mm.

The new species is distinguished from *A. sodalis* by the lighter coloration of the elytra and the pronotum, the colour of the basal antennomeres only weakly contrasting with that of the apical antennomeres, the - on average - more distinctly microsculptured and less shining forebody (especially head!), the slightly shorter elytra (in *A. sodalis* at suture at least as long as pronotum, usually slightly longer), the slightly different shape of the spermathecal duct (shorter and more compact than in *A. sodalis*), and above all by the much more slender median lobe of the aedeagus.

Distribution and bionomics: *Atheta teneris* is currently known only from Córdoba in southern Spain. Most of the types were collected from bat faeces in the Cueva de la Pasada de las Algeciras, Hornachuelos (BAENA, pers. comm.). The female paratype collected in December 1992 is teneral. There is some doubt that the species is a true troglophile, particularly because it lacks the adaptative reductions usually encountered in cave-dwellers (i. e. reduced pigmentation, eyes, and wings). The collection data suggest that it is associated with bat faeces and possibly also other kinds of organic matter. The closely related *A. sodalis*, a generalized species occurs in a wide range of habitats (e. g. leaf litter, fungi, dead wood, bird nests), and has also repeatedly been found in subterranean nests and burrows (e. g. BAUMANN & IRMLER 1979, GENSICKE 1960, ISRAELSON 1962, 1971a, 1971b).

Acknowledgements

We are most grateful to Manuel Baena, Córdoba, for the generous gift of staphylinid material collected in Spanish caves and for some additional data.

Zusammenfassung

Atheta teneris sp.n. (Spanien: Córdoba) wird beschrieben und von der ähnlichen *A. sodalis* (ERICHSON) unterschieden. Habitus und Differentialmerkmale werden abgebildet.

References

- BAUMANN E. & U. IRMLER (1979): Die Fauna der Gänge und Nester von Wühlmäusen im Naturpark "Hoher Vogelsberg". III. Die Käfer (Ins. Coleoptera). — Entomol. Blätter 74: 145-154.
- BORDONI A. & P. OROMÍ (1999): Coleoptera Staphylinidae. — In: JUBERTHI C. & V. DECU (eds.): Encyclopaedia Biospeologica. Vol. 2, Société de Bioospéologie, Bucarest - Moulis: 1147-1162.
- GENSICKE F. (1960): Zur Kenntnis der Nestfauna einiger Muridenarten in der Umgebung von Greifswald. — Wiss. Zeitschr. Ernst-Moritz-Armdt-Univ. Greifswald 9: 189-197.
- ISRAELSON G. (1962): Om skalbaggsfaunan vintertid i bon av mullvad (*Talpa europaea*) och vattensork (*Arvicola terrestris*). — Natur i Göinge, 1961: 6-12.
- ISRAELSON G. (1971a): An inventory of the coleopterous summer-fauna of subterranean mole-runs in a Danish forest. — Entomol. Ts. Årg. 92: 74-77.
- ISRAELSON G. (1971b): On the coleopterous fauna of the subterranean tunnel systems of small mammals, with particular reference to burrows of voles in Finland. — Notul. Entomol. 51: 113-123.

Authors' addresses:

Dr. Volker ASSING
Gabelsbergerstr. 2
D-30163 Hannover, Germany
e-mail: vassing.hann@t-online.de

Jürgen VOGEL
Albert-Blau-Str. 19
D-02827 Görlitz, Germany